



Best Available Retrofit Technology (BART)

LSA Document #06-208(APCB)

Overview

This rule concerns Best Available Retrofit Technology (BART) that is required as part of the implementation of the federal Regional Haze rule. The Regional Haze rule requires Indiana to submit a state implementation plan (SIP) by December 17, 2007, that includes BART. The United States Environmental Protection Agency (U.S. EPA) published guidelines for BART to assist States to comply with the federal Regional Haze rule requirements.

Citations Affected

Adds 326 IAC 26 concerning best available retrofit technology.

Affected Persons

This rule affects ALCOA Inc., ESSROC Cement Corporation, ESSROC Materials, GE Plastics Mt.Vernon, Inc., and Mittal Steel USA Inc.-Burns Harbor. This rule could also affect sources with BART-eligible units that have not been identified; this rule would require those sources to notify IDEM of the existence of the BART-eligible units and they would be subject to this rule. Notification of this rulemaking has been sent to all known affected parties identified during the course of this rulemaking.

Reasons for the Rule

BART is required as part of the federal Regional Haze rule in accordance with Clean Air Act.

Economic Impact of the Rule

U.S. EPA requires sources subject to BART to install and operate BART within five years of approval of each state's Regional Haze SIP. This rulemaking is implementing the federal BART requirement and does not impose any additional requirements or costs beyond what is required by U.S. EPA. It will not be possible to

determine specific costs for affected companies until the required analyses are completed by the affected companies and approved by the department.

Benefits of the Rule

The BART rule will provide the mechanism for complying with the requirement to address visibility impairment in Class I areas as part of the Regional Haze SIP requirement.

Description of the Rulemaking Project

Basic Purpose and Background

On July 6, 2005, U.S. EPA published the BART guidelines in the Federal Register (70 FR 39104). These guidelines are a component of the Regional Haze regulations, published on July 1, 1999, that are intended to protect and improve visibility in national parks and wilderness areas.

The Regional Haze rule requires IDEM to submit a SIP to address visibility impairment in federally-protected parks and wilderness areas (Class I areas). To meet this requirement, IDEM must evaluate whether certain emission units within affected industries adversely impact visibility in Class I areas. Although there are no Class I areas in Indiana, there are several in the region that may be affected by emissions from Indiana sources. The BART guidelines provide the mechanism for complying with the requirement to address visibility impairment in Class I areas. IDEM is obligated to submit the Regional Haze SIP by December 17, 2007, including a commitment that BART will be implemented in accordance with the federal guidelines.

The Regional Haze Rule

In 1999, U.S. EPA published a final rule to address a visibility impairment known as regional haze (64 FR 35714, July 1, 1999).

Regional haze is caused by tiny particles that absorb and scatter sunlight, creating white and brown haze. The Regional Haze rule requires States to submit SIPs to address regional haze visibility impairment in 156 Federally-protected parks and wilderness areas. These 156 scenic areas are called “mandatory Class I Federal areas” in the Clean Air Act (CAA) but are generally referred to as “Class I areas.” The 1999 rule was issued to fulfill the requirements of Section 169A and 169B of the CAA. As required by the CAA, U.S. EPA included in the final Regional Haze rule a requirement for BART at certain large stationary sources. The Regional Haze rule uses the term “BART-eligible source” to describe these sources. Under the CAA, BART is required for any BART-eligible source that a State determines “emits any air pollutant which may reasonably be anticipated to cause or contribute to any impairment of visibility in any such area.” Accordingly, for stationary sources meeting these criteria, States must address the BART requirement when they develop their Regional Haze SIPs.

Though States have some discretion on use of the BART guidelines for most sources, Section 169A(b) of the CAA and 40 CFR 51.308 (e)(1)(ii)(B) require that States follow the BART guidelines for fossil-fuel fired generating powerplants having a capacity in excess of 750 megawatts.

BART Alternatives

In the First Notice of Comment Period published in the Indiana Register on August 15, 2006 (20060726-IR-326060208FNA), an overview of the BART process was provided. Since that time, IDEM has reviewed and considered several comments and approaches by other states on various alternatives allowed by the federal guidelines.

IDEM believes following the BART guidelines rather than a state-wide alternative program is the most efficient approach for Indiana to meet the federal deadline. Commentors support this approach but also stated a desire for flexibility. IDEM intends to provide flexibility in establishing BART controls to the extent allowed by the federal guidelines and consistent with the goal of improved visibility.

IDEM is concerned that an emissions trading program would not be practical in Indiana because there is not a sufficient number of companies in the state impacted by BART to establish a viable trading program. Sources subject to BART can choose to install and operate BART controls in accordance with the BART guidelines rather than participate in a BART emission trading program, which could further reduce the number of participants. In addition, Indiana has determined that the Clean Air Interstate Rule (CAIR) can substitute for BART for electric generating units (EGUs) for NO_x and SO₂, so those EGUs would not be included in the BART program.

On October 13, 2006, U.S. EPA published a final rule on alternatives to source-specific BART (71 FR 60612) that will allow sources subject to BART to propose an alternative to BART controls. Sources that propose an alternative to BART would be required to demonstrate that the proposed alternative is better than BART and would still have to conduct the analysis to establish what the BART control level should be for the sources subject to BART. The analysis would need to show greater reasonable progress toward improved visibility. The alternative could affect BART and non-BART units. Any alternative must be for the same pollutant and must be demonstrated to attain a greater improvement in visibility than BART.

One alternative to installing controls on every BART unit is that a company could submit a compliance plan with a BART analysis in which the source agrees to limitations that would provide a greater improvement in visibility. The analysis would need to demonstrate how visibility would be improved and could include limitations at different locations of the same company, different companies, or at a source not subject to BART.

IDEM has been working with the Midwest Regional Planning Organization (MRPO) using CALPUFF for a consistent regional and national modeling approach for addressing BART eligibility and the analyses to determine which sources are subject to BART. IDEM compared results of using a 0.5 deciview threshold at both the 98th and 99th percentile. Results show that sources that exceed the 0.5 deciview at the 99th percentile also exceeded at the 98th percentile.

Therefore, consistent with U.S. EPA guidance, IDEM proposes using the 98th percentile as the boundary to determine visibility impairment at Class I areas for BART determinations.

The BART guidelines require BART determinations for sources subject to BART for sulfur dioxide (SO₂), oxides of nitrogen (NO_x), and particulate matter (PM). The guidelines allow states to determine whether or not volatile organic compounds (VOCs) or ammonia need to be included in the BART determinations. Based on comments received and consideration of a consistent regional approach, IDEM proposes not to include VOCs or ammonia in Indiana's BART determinations. IDEM notes that several other upcoming state rulemakings will address VOC emissions including: architectural and industrial maintenance (AIM) coatings, automobile refinishing, consumer products, degreasing, and stage I vapor recovery.

Based on comments received and further consideration of potential BART controls, IDEM has determined that establishing a compliance date of less than 5 years after approval of the Regional Haze SIP may be difficult for many of the affected companies. However, U.S. EPA meant for the 5 years to start from the time the BART emission limits become federally enforceable. Because this rule proposes a time period and process to submit the BART engineering analysis rather than including the emission limits, it is necessary to set a compliance date consistent with the BART guidelines. Therefore, IDEM proposes to require compliance with approved BART controls within 5 years of the effective date of this rule. This rule is anticipated to become effective in early 2008, so the compliance date of 2013 is consistent with U.S. EPA expectations for source compliance with BART requirements.

In states affected by the Clean Air Interstate Rule (CAIR), U.S. EPA has stated that states may determine that CAIR improves visibility more than implementing BART for electric generating units (EGUs) participating in a CAIR cap and trade program. By participating in the CAIR cap-and-trade program, Indiana may choose to use CAIR as a substitute for BART rather than require BART-eligible EGUs to install, operate, and maintain BART. After consideration of the CAIR and BART programs,

Indiana has determined that participation in CAIR should satisfy the BART requirements for EGUs for NO_x and SO₂. The potential impact of PM from EGUs is still being evaluated to determine if there are impacts on Class I areas.

BART in Indiana

IDEM identified sources within the BART source categories and sent a survey to obtain additional information to develop a list of BART-eligible sources. IDEM has conducted modeling in coordination with the Midwest Regional Planning Organization (MRPO) to determine which BART-eligible sources are subject to BART. Using dispersion modeling (Option 1 in the BART guidelines), IDEM has determined that the following non-EGUs are subject to BART: ALCOA Inc., ESSROC Cement Corporation, GE Plastics Mt. Vernon, Inc., and Mittal Steel USA Inc.-Burns Harbor. ESSROC Materials is BART-eligible, but has not submitted information to conduct revised BART modeling, therefore it will be assumed that ESSROC Materials is subject to BART until IDEM receives emissions and stack information and a BART determination can be made through CALPUFF modeling.

The companies subject to BART will be required to submit to IDEM a BART analysis to determine the proper level of BART control for each emissions unit and pollutant subject to BART. This analysis must consider the following factors identified by U.S. EPA: (1) the costs of compliance, (2) the energy and non-air quality environmental impacts of compliance, (3) any existing pollution control technology in use at the source, (4) the remaining useful life of the source, and (5) the degree of improvement in visibility that may reasonably be anticipated to result from the use of such technology.

Enforceable Limits and Compliance Dates

Indiana must establish enforceable emission limits based on the BART guidelines and require compliance within five years after U.S. EPA approves the Regional Haze SIP. An enforceable emission limit must be established for each affected emission unit and for each pollutant subject to review that is emitted from the source. Under certain circumstances, a design, equipment, work practice, operation

standard, or combination of these types of standards may be used in place of conventional emission limits. Sources subject to BART may also propose another alternative in the BART analysis. U.S. EPA recommends allowing “averaging” emissions across any set of BART-eligible emission units within a fence line, as long as the emission reductions from each pollutant being controlled for BART would be equal to or greater than those reductions that would be obtained by simply controlling each of the BART-eligible units that constitute BART-eligible source.

Because the BART requirements themselves are “applicable” requirements of the CAA, they must be included as Title V permit conditions according to the procedures established in 40 CFR Part 70. Section 302(k) of the CAA requires emissions limits such as BART to be met on a continuous basis. Although this provision does not necessarily require the use of continuous emissions monitoring (CEMs), it is important that sources employ techniques that ensure compliance on a continuous basis. Monitoring requirements generally applicable to sources, including those that are subject to BART, are governed by other regulations.

Scheduled Hearings

First Public Hearing: June 6, 2007, at 1:00 p.m., at the Indiana Government Center-South, 402 West Washington Street, Conference Center Room A, Indianapolis, Indiana.

Second Public Hearing: October 3, 2007, at 1:00 p.m., at the Indiana Government Center-South, 402 West Washington Street, Conference Center Room B, Indianapolis, Indiana.

Consideration of Factors Outlined in Indiana Code 13-14-8-4

Indiana Code 13-14-8-4 requires that in adopting rules and establishing standards, the board shall take into account the following:

- (1) All existing physical conditions and the character of the area affected.
- (2) Past, present, and probable future uses of the area, including the character of the uses of surrounding areas.
- (3) Zoning classifications.
- (4) The nature of the existing air quality or existing water quality, as appropriate.
- (5) Technical feasibility, including the quality

conditions that could reasonably be achieved through coordinated control of all factors affecting the quality.

(6) Economic reasonableness of measuring or reducing any particular type of pollution.

(7) The right of all persons to an environment sufficiently uncontaminated as not to be injurious to:

- (A) human, plant, animal, or aquatic life; or
- (B) the reasonable enjoyment of life and property.

Consistency with Federal Requirements

The new rule is consistent with federal laws, rules, and guidance.

Rulemaking Process

The first step in the rulemaking process is a first notice published in the *Indiana Register*. This includes a discussion of issues and opens a first comment period. The second notice is then published which contains the comments and the departments responses from the first comment period, a notice of first meeting/hearing, and the draft rule. The Air Pollution Control Board holds the first meeting/hearing and public comments are heard. The proposed rule is published in the *Indiana Register* after preliminary adoption along with a notice of second meeting/hearing. If the proposed rule is substantively different from the draft rule, a third comment period is required. The second public meeting/hearing is held and public comments are heard. Once final adoption occurs, the rule is reviewed for form and legality by the Attorney General, signed by the Governor, and becomes effective 30 days after filing with the Legislative Services.

IDEM Contact

Additional information regarding this rulemaking action can be obtained from Christine Pedersen, Rule Development Section, Office of Air Quality, (317) 233-6868 or (800) 451-6027 (in Indiana).